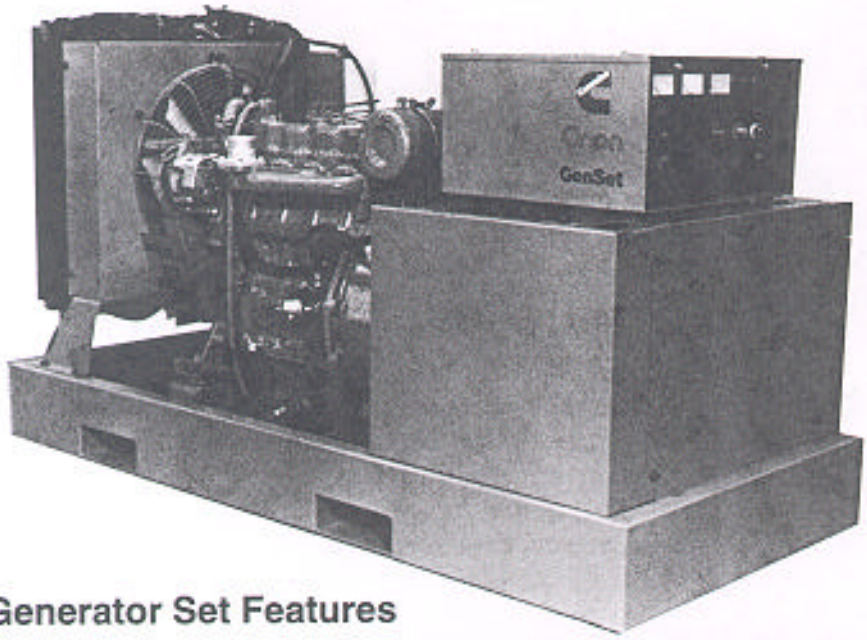
15 DKAC 60 Hz
12.5 DKAC 50 Hz
Diesel-Fueled Generator Set

	STANDBY	PRIME
60 Hz	15.0 kW 18.8 kVA	13.5 kW 16.9 kVA
50 Hz	12.5 kW 15.6 kVA	11.0 kW 13.8 kVA



Generator Set Features

- **Single-source design, manufacturing and testing of all set components and accessories by Onan Corporation.**
- **Accepts 100% of nameplate kW rating in one step, in compliance with NFPA 110, Paragraph 5-13.2.6.**
- **Engine torque-matched excitation system provides quick recovery from transient speed dips.**
- **Low reactance generator design offers low waveform distortion with non-linear loads and provides excellent motor starting capabilities.**

Standard Equipment

ENGINE
Onan® 4-cycle diesel engine.

ALTERNATOR
Brushless Onan AC alternator provides broad range reconnectible output.

CONTROL PANEL
Vibration isolated control with analog instrumentation.

VOLTAGE REGULATOR
Electronic voltage regulator utilizes asynchronous power transitor operation that provides immunity from SCR loads.

COOLING SYSTEM
High ambient 122° F (50° C) system.

SKID BASE
Supports the alternator and engine. Battery rack and cooling system mount to the skid base. Integral vibration isolation. Forklift pockets for handling.

Generator Set Testing

The Prototype Test Support (PTS) program is our commitment to verifying the integrity of our designs and products.

Before the generator sets are put into production, prototype models are subjected to demanding tests with typical/atypical loads and transients anticipated in service.

Production models earn the PTS seal only after meeting the performance criteria established by the program.

Single-Source Warranty

All generator set components and systems are covered by a limited one-year warranty. Optional two and five-year extended programs are available.

Standard Models are CSA certified.

Generator Set Performance

Voltage Regulation
Under load from no load to 100% load will be within ± 2%.
Random Voltage Variation
For constant loads, from no load to 100% load will not exceed ±1% of its mean value.
Frequency Regulation
Under varying loads from no load to 100% load: 5% (Isochronous with optional electronic governor).
Random Frequency Variation
Will not exceed ± 0.5% of its mean value for constant loads from no load to full load.
Electromagnetic Interference Attenuation
Meets requirements of most industrial and commercial applications.

AC Waveform Total Harmonic Distortion
Less than 5% total no load to full linear load, and less than 3% for any single harmonic
Telephone Influence Factor (TIF)
Less than 40 per NEMA MG1-22.43.
Telephone Harmonic Factor (THF) Less than 3.
Alternator Temperature Rise
At rated load is less than 125° C at standby rating, per NEMA MG1.22.40, IEEE115 and IEC 34–1.
Radio Interference
Meets requirements of most industrial and commercial applications.
Maximum Sound Level at 23 ft. (7m) full load:
60 Hz; 74 dBa 50 Hz; 73 dBa

Engine: Onan* D1703 3-cylinder, indirect injection diesel

Design: 4-cycle, water-cooled, natural aspiration.
Bore: 3.4" (87 mm) **Stroke:** 3.6" (93 mm).
Piston Displacement: 100 cubic inches (1.6 liters).
Valves: Two per cylinder, single springs.
Crankshaft: Forged steel, integral counterweight-type.
Connecting Rods: Forged steel with I-beam design.
Compression Ratio: 23:1.
Starting: 12-volt, negative ground.
Cranking Current: 350 amps at ambient temperature of 32° F (0° C).
Battery Charging Alternator: 40-amp.
Cylinder Block: Cast iron.

Fuel System: Indirect injection, Number 2 diesel fuel; Fuel filters; Fuel/water separator; Automatic electric fuel shutoff; Distributor injection pump with integral mechanical governor.
Air Cleaner: Heavy duty with restriction indicator.
Lube Oil Capacity: 7.4 US quarts (7.0 liters).
Lube Oil Required: API CD 10W-30.
Lube Oil Filter: Single spin-on, full flow.
Cooling System: High ambient 122° F (50° C) radiator.

** Built for Onan to exacting standards of quality and performance.*

Alternator: Onan

Design:
Revolving field, single bearing, 4-pole, brushless, drip-proof construction. Standard 125° C temperature rise at standby power rating. Class H insulation system per NEMA MG1–1.65 and BS2757. The main alternator and exciter insulation systems are impregnated for operation in severe environments where sand, salt sea spray and chemical corrosion are installation factors.
Stator:
Skewed stator and 2/3 pitch windings minimize field heating and voltage harmonics.
Rotor:
Dynamically balanced assembly. Direct coupled to engine by a flexible drive disc. Complete amortisseur (damper) windings help minimize voltage deviations and heating effects under unbalanced loads. The rotor is supported by a pre-lubricated, maintenance-free ball bearing.
Phase Rotation: A (U), B (V), C (W)
Alternator Cooling: Direct drive centrifugal blower

Torque-Matched Voltage Regulation:
The voltage regulator provides torque-matched underfrequency compensation to optimize motor starting performance and assist the engine during transient load conditions. Asynchronous power transistor operation provides immunity from SCR tracking when applied to non-linear loads. The brushless exciter armature powers the main alternator field winding through shaft-mounted, three-phase, full wave silicon diode rectifiers.
Shunt Excitation:
The excitation system derives its power from the main output of the generator, eliminating the need for a separate excitation power source. This excitation system, combined with the Onan low reactance generator, comprise a system that provides sufficient short circuit current for selective clearing of instantaneous overcurrent devices.

Cummins

Onan

PowerCommand™ Diesel GenSet

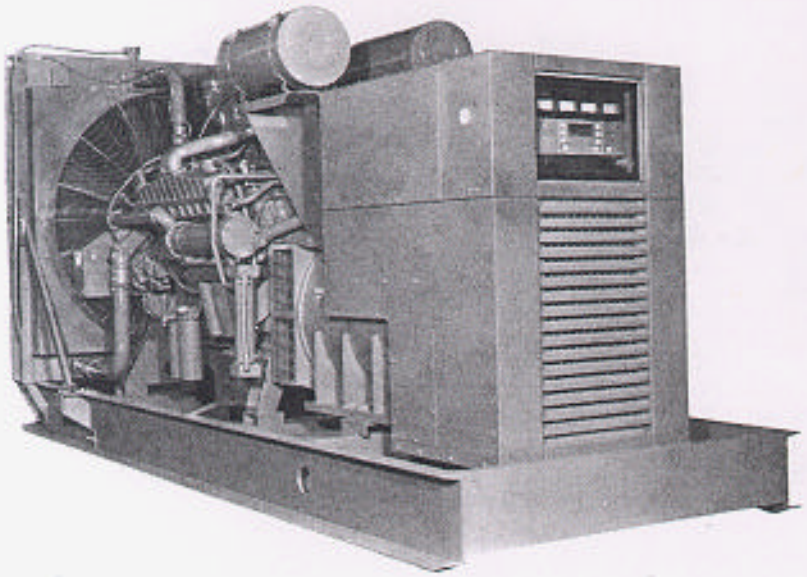
600 DFGB 60 Hz
550 DFGB 50 Hz

	STANDBY	PRIME
60 Hz	600 kW 750 kVA	545 kW 681 kVA
50 Hz	550 kW 688 kVA	500 kW 625 kVA

The Prototype Test Support program verifies the performance integrity of the PowerCommand GenSet design. Onan products bearing the PTS symbol meet the prototype test requirements of NFPA110 for Level 1 systems.

The PowerCommand Control is listed UL–508 – Category NIWT7 for U.S. and Canadian usage.

All models are CSA certified to product class 4215–01.



Generator Set Features

CUMMINS® HEAVY-DUTY ENGINE

Rugged 4-cycle industrial diesel engine for reliable power production and excellent transient performance.

ALTERNATOR

- Low reactance, 2/3 pitch, Class H insulation, for superior motor starting, exceptional short circuit capability and minimizes voltage distortion when powering non-linear loads.

PERMANENT MAGNET GENERATOR (PMG)

- Reliable excitation power source to enhance motor starting, sustain short circuit current and isolate the excitation system from non-linear loads.

HIGH AMBIENT COOLING SYSTEM

- Full rated output in ambient conditions up to 50° C (122° F).

FULL LOAD PICK-UP

- All PowerCommand GenSets accept 100% of full nameplate standby rating in one step, in compliance with NFPA110.

E-COAT FINISH

- Dual electro-deposition coating system provides high resistance to scratching, corrosion and paint fading.

PowerCommand™ Control Features

INTEGRATED CONTROL SYSTEM

- A microprocessor-based genset monitoring, metering, and control system offers an advanced level of functions for reliability and optimum genset performance.
- An extensive array of standard control and digital display features that eliminate the need for discrete component devices such as a voltage regulator, governor and protective relays.

ALARM AND STATUS MESSAGE DISPLAY

- Provides detailed information on all critical parameters of the generator set.

AMPSENTRY™ PROTECTION

- A power management system that guards the electrical integrity of the alternator and power system from the effects of overcurrent, over/under voltage, over/under frequency and overload conditions.

BATTERY MONITORING SYSTEM

- The PowerCommand Control runs a battery load test every time the engine is required to start. It detects and sends an alarm for weak battery conditions and continually monitors the battery charging system for low and high voltage.

AC OUTPUT METERING

- Combines true RMS digital metering and analog metering to provide accurate digital readout plus instant analog indication of trends and operating characteristics.

GENSET MONITORING

- Monitors and digitally displays status of all engine and alternator functions critical to reliable generator set performance. Monitors and detects engine sender failures.

UL508 LISTED CONTROL PANEL

- The single-membrane panel and gasketed enclosure protect the internal components from airborne contaminants. The control is RFI/EMI and successfully surge tested and certified.

SMART STARTING CONTROL SYSTEM

- A multi-functional digital control system integrates fuel ramping and field excitation to minimize frequency and voltage overshoot and limit black smoke.

OPTIONAL POWERCOMMAND NETWORK COMMUNICATIONS

- The PowerCommand Control can be equipped to communicate over an Onan® Echelon™ LonWorks™ communication network for local or remote monitoring and control of the entire on-site power system.

Generator Set Performance

Voltage Regulation
Under load from no load to 100% load will be within ± 0.5%.

Random Voltage Variation
For constant loads, from no load to 100% load will not exceed ± 0.5% of its mean value.

Frequency Regulation
Isochronous under varying loads from no load to 100% load.

Random Frequency Variation
Will not exceed ± 0.25% of its mean value for constant loads from no load to full load.

Electromagnetic Interference Attenuation
Meets requirements of most industrial and commercial applications.

AC Waveform Total Harmonic Distortion
Less than 5% total no load to full linear load, and less than 3% for any single harmonic.

Telephone Influence Factor (TIF)
Less than 50 per NEMA MG1-22.43.

Alternator Temperature Rise
At rated load is less than 105° C at prime power rating and less than 125° C at standby rating, per NEMA MG1.22.40, IEEE115 and IEC 34–1.

Radio Frequency Interference
Noise and Surge Immunity: Prototype test compliance verification of PowerCommand Generator Set to IEC 801.2, Level 4 for electrostatic discharge; IEC 801.3, Level 3 for radiated susceptability; IEC 801.4, Level 4 for electrically fast transients; IEC 801.5 Level 5 for voltage surge immunity; and MIL STD 461C, Part 9 for radiated emissions (EMI).

Engine: Cummins VTA28-G5 V-12, direct injection diesel*

Design: 4-cycle, water-cooled, turbocharged and aftercooled.
Bore: 5.5" (140 mm) **Stroke:** 6" (152 mm).
Piston Displacement: 1710 cubic inches (28 liters).
Valves: Four per cylinder, single springs.
Crankshaft: Forged steel, integral counterweight-type.
Connecting Rods: Forged steel with I-beam design.
Compression Ratio: 13.1:1.
Starting: 24-volt, negative ground.
Cranking Current: 660 amps at ambient temperature of 32° F (0° C).
Battery Charging Alternator: 45-amp.
Cylinder Block: Cast iron with replaceable wet liners
Fuel System: Direct injection, Number 2 diesel fuel; Fuel filters; Automatic electric fuel shutoff; Cummins PT fuel injection system with integral EFC govenor.
Air Cleaner: Dry-element with restriction indicator.
Lube Oil Capacity: 89 US quarts (84 liters).
Lube Oil Required: API CD 15W-40.
Cooling System: High ambient 122° F (50 ° C) radiator.

*The VTA28-G5 engine uses different hardware for 50 Hz and 60 Hz operation. Specify frequency at time of order.

Alternator: Onan

Design:
Revolving field, single bearing, 4-pole, brushless, drip-proof construction. Standard 125° C temperature rise at standby power rating. Class H insulation system per NEMA MG1–1.65 and BS2757. The main alternator and exciter insulation systems are impregnated for operation in severe environments where sand, salt sea spray and chemical corrosion are installation factors.

Stator:
Skewed stator and 2/3 pitch windings minimize field heating and voltage harmonics.

Rotor:
Dynamically balanced assembly. Direct coupled to engine by a flexible drive disc. Complete amortisseur (damper) windings help minimize voltage deviations and heating effects under unbalanced loads. The rotor is supported by a pre-lubricated, maintenance-free ball bearing.

Torque-Matched Voltage Regulation:
The voltage regulator provides torque-matched underfrequency compensation to optimize motor starting performance and assist the engine during transient load conditions. The brushless exciter armature powers the main alternator field winding through shaft-mounted, three-phase, full wave silicon diode rectifiers. Semi-conductor surge suppressors protect the diodes from transient overvoltages induced by load surges.

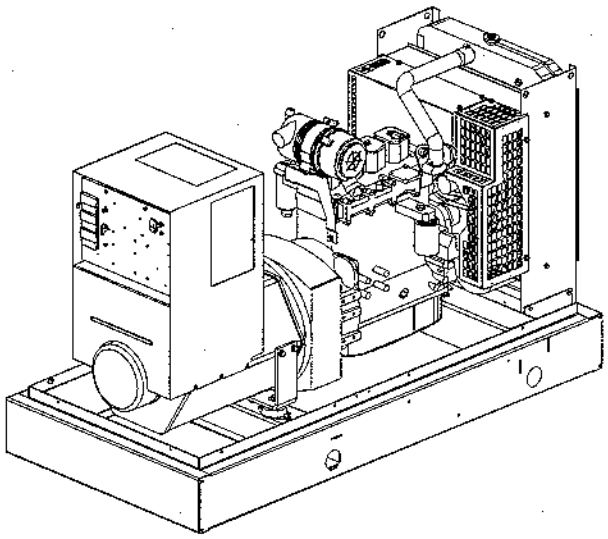
PMG (Permanent Magnet Generator):
Provides more power for motor starting. Sustains short circuit current at approximately 300% for not more than 10 seconds on either single- or three-phase faults. Isolates the excitation system from non-linear load distortion effects.

Phase Rotation: A (U), B (V), C (W)

Alternator Cooling: Direct drive centrifugal blower

35kW - 60kW 60 Hz
28kW - 50kW 50 Hz
Diesel Fueled
4B Series

Model	Data Sheet	EPA-MOH	Standby kW (kVA)		Prime kW (kVA)	
			60 Hz	50 Hz	60 Hz	50 Hz
DGBB	D-3000	Standard	35 (44)	28 (35)	32 (40)	25 (31)
DGBC	D-3001	Standard	40 (50)	32 (40)	35 (44)	29 (36)
DGCA	D-3002	Standard	50 (63)	40 (50)	45 (56)	36 (45)
DGCB	D-3003	Standard	60 (75)	50 (63)	55 (69)	45 (56)



The Prototype Test Support program verifies the performance integrity of the generator set design. Onan products bearing the PTS symbol meet the prototype test requirements of NFPA110 for Level 1 systems.

The PowerCommand Control is listed UL-508 - Category NITW7 for U.S. and Canadian usage.

All models are CSA certified to product class 4215-01.

Standard Genset Features

LOW EXHAUST EMISSIONS
- Certified to United States Environmental Protection Agency Mobile Off Highway standards

CUMMINS® HEAVY-DUTY ENGINE
- Rugged 4-cycle industrial diesel engine
- Excellent transient performance

ALTERNATOR
- Low reactance 2/3 pitch
- Class H insulation
- Exceptional short circuit capability
- Low waveform distortion with non-linear loads
- Excellent motor starting capabilities

ELECTRONIC VOLTAGE REGULATOR
- Precise regulation
- Underfrequency compensation
- Torque-matched system provides fast recovery from transient load changes

FULL LOAD PICK-UP
- Gensets accept 100% of full nameplate standby rating in one step, in compliance with NFPA110, Paragraph 5-13.2.6.

COOLING SYSTEM
- High ambient 122° F (50° C) system optional, 104°F (40°C) system standard

SKID BASE
- Supports engine, alternator and radiator with integral vibration isolation

E-COAT FINISH
- Dual electro-deposition coating system provides high resistance to scratching, corrosion and paint fading

STANDARD CONTROL SYSTEM
- Run-Stop-Remote Switch
- Remote Starting, 12 Volt, 2 Wire
- Safety Shutdowns

OPTIONAL CONTROL SYSTEMS
- Detector 12 Control NFPA 110 Compliant
- PowerCommand Advanced Digital Control

SINGLE-SOURCE RESPONSIBILITY
- Design, manufacture and test of all major set components and accessories by Onan Corporation and affiliated companies.

SINGLE-SOURCE WARRANTY
- All generator set components and systems are covered by an express written limited one-year warranty
- Optional extended warranty programs available

Generator Set Specifications

Voltage Regulation, no load to Full load:	±1.0%
Random Voltage Variation:	±1.0%
Frequency Regulation:	5.0%
Random Frequency Variation:	±0.5%
Radio Frequency Interference:	Optional PMG excitation operates in compliance with BS800 and VDE level G and N. Addition of RFI protection kit allows operation per MIL-STD- 461 and VDE level K

Engine Specifications

Design:	4 cycle, water-cooled
Bore:	4.02"(102mm)
Stroke	4.72"(120 mm)
Displacement:	239 cubic inches (3.9 liters)
Cylinder Block:	Cast iron
Cranking Current:	460 amps at ambient temperature of 32°F (0°C)
Battery Charging Alternator:	37 amps
Starting Voltage:	12 volt, negative ground
Fuel System:	Direct injection, number 2 diesel fuel; fuel filter; water separator; automatic electric fuel shutoff, fuel & aircleaner
Air Cleaner Type:	Two stage dry element with restriction indicator
Lube Oil Filter Type(s):	Single spin-on, full flow
Cooling System:	104°F (40°C) ambient radiator

Alternator Specifications

Design:	Brushless, 1800 RPM (60 Hz), 1500 RPM (50 Hz), 4 pole, drip proof revolving field
Stator:	2/3 pitch
Rotor:	Direct coupled by flexible discs
Insulation System:	Class H per NEMA MG1-1.65
Temperature Rise:	150° C Standby
Exciter Type:	Shunt
Phase Rotation:	A (U), B (V), C (W)
Alternator Cooling:	Direct drive centrifugal blower
AC Waveform Total Harmonic Distortion:	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor(TIF):	<50 per NEMA MG1-22.43.
Telephone Harmonic Factor (THF):	<3

Voltage Selections

60Hz, 3-Phase, Reconnectable	60Hz, 1-Phase, Non-Reconnectable	60Hz, 3-Phase, Non-Reconnectable	50Hz, 3-Phase, Reconnectable		50Hz, 1-Phase, Non-Reconnectable
☐ 120/208	☐ 120/240	☐ 220/380	☐ 110/190	☐ 230/400	☐ 100/200
☐ 127/220		☐ 347/600	☐ 115/200	☐ 240/415	☐ 110/220
☐ 139/240			☐ 120/208	☐ 254/440	☐ 115/230
☐ 120/240			☐ 127/220	☐ 115/230	☐ 120/240
☐ 240/416			☐ 100/200	☐ 120/240	
☐ 254/440			☐ 110/220		
☐ 227/480			☐ 220/380		

Generator Set Options

Engine
- ☐ 120/240 Volt, 1000 watt coolant heaters
- ☐ 120/240 Volt, 150 watt lube oil heater
- ☐ Electronic governor

Cooling System
- ☐ 125°F/50°C ambient cooling
- ☐ Remote radiator cooling

Fuel System
- ☐ 70 gal.(265 liter) dual wall sub-base tank
- ☐ 140 gal.(530 liter) dual wall sub-base tank
- ☐ 44 gal. (167 liter) in-skid fuel tank
- ☐ 80 gal (300 liter) single wall sub-base fuel tank

Alternator
- ☐ 105°C rise alternator
- ☐ 125°C rise alternator
- ☐ Anti-condensation heater
- ☐ Extended stack (full single phase output)
- ☐ PMG excitation

Control Panel
- ☐ Control anti-condensation heater
- ☐ CSA 282 compliance package
- ☐ Detector 12 control
- ☐ Emergency stop
- ☐ Engine gauges
- ☐ Low battery voltage warning
- ☐ Low coolant level warning/shutdown
- ☐ PowerCommand Control
- ☐ Remote fault signal package
- ☐ Remote speed adjust

Exhaust System
- ☐ Genset mounted muffler
- ☐ Slip on exhaust connection
- ☐ Heavy duty exhaust elbow

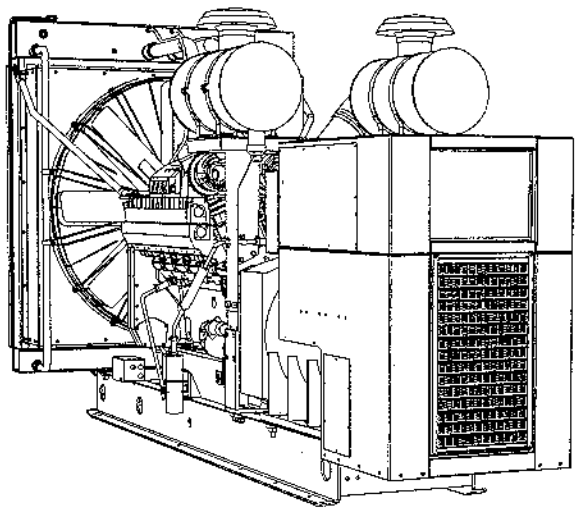
Generator Set
- ☐ AC entrance box
- ☐ Batteries
- ☐ Battery Charger
- ☐ Export box packaging
- ☐ Main line circuit breaker
- ☐ PowerCommand Network
- ☐ Quite Site Stage I housing w/silencer
- ☐ Quite Site Stage II housing w/silencer
- ☐ Remote annunicator panel
- ☐ Spring isolators
- ☐ Weather protective enclosure with silencer
- ☐ 2 year prime power warranty*
- ☐ 2 year standby warranty
- ☐ 5 year basic power warranty

* Available in North America Only

Cummins Onan

750kW - 900kW 60 Hz
620kW - 800kW 50 Hz
Diesel Fueled
QST30 Series

		Standby kW (kVA)		Prime kW (kVA)	
Model	**Data Sheet**	**60 Hz**	**50 Hz**	**60 Hz**	**50 Hz**
DFHA	**D-3004**	**750** (938)	**620** (775)	**680** (850)	**560** (700)
DFHB	**D-3005**	**800** (1000)	**700** (875)	**725** (906)	**640** (800)
DFHC	**D-3006**	**900** (1125)	**800** (1000)	**818** (1023)	**725** (906)



Standard Genset Features

CUMMINS® HEAVY-DUTY ENGINE
- Rugged 4-cycle industrial diesel engine
- Electronic governing for optimal steady state and transient performance

ALTERNATOR
- Low reactance 2/3 pitch
- Class H insulation
- Sustaining short circuit capability
- Low voltage distortion with non-linear loads

PERMANENT MAGNET GENERATOR (PMG)
- Enhanced motor starting
- Sustained short circuit current
- Excitation system isolated from non-linear loads

FULL LOAD PICK-UP
- PowerCommand®Gensets accept 100% of full nameplate standby rating in one step, in compliance with NFPA110

SINGLE-SOURCE RESPONSIBILITY
- Design, manufacture and test of all major set components and accessories by Onan Corporation and affiliated companies

SINGLE-SOURCE WARRANTY
- All generator set components and systems are covered by an express limited one-year warranty. See distributor/dealer for details
- Optional extended warranty programs available

PowerCommand System Control Features

INTEGRATED CONTROL SYSTEM
- Microprocessor control system
- Reliable and optimum genset performance
- Integrated governor and voltage regulation system

ALARM AND STATUS MESSAGE DISPLAY
- Information on all critical parameters of the genset.

AMPSENTRY™ PROTECTION
- Power management system that guards the electrical integrity of the alternator and power system from the effects of overcurrent, over/under voltage, under frequency and overload conditions

BATTERY MONITORING SYSTEM
- Battery load test each time the engine is started
- Alarm for weak battery condition
- Monitors the battery system for low and high voltage

AC OUTPUT METERING
- RMS digital metering
- Analog metering indication of operating trends

GENSET MONITORING
- Monitors status of all engine and alternator functions
- Digitally displays status of all engine and alternator functions
- Monitors and detects engine sender failures

UL508 LISTED CONTROL PANEL
- Single-membrane panel and gasketed enclosure
- RFI/EMI and surge tested and approved

SMART STARTING CONTROL SYSTEM
- Multi-functional digital control system integrates fuel ramping and field excitation to minimize frequency and voltage overshoot and limit black smoke

OPTIONAL POWERCOMMAND DIGITAL PARALLELING CONTROL
- The PowerCommand Control can be equipped to provide digital paralleling controls for synchronizing and load sharing on-set.

Registered To ISO 9001

The Prototype Test Support program verifies the performance integrity of the generator set design. Onan products bearing the PTS symbol meet the prototype test requirements of NFPA110 for Level 1 systems.

The PowerCommand Control is listed UL-508 - Category NITW7 for U.S. and Canadian usage.

All models are CSA certified to product class 4215-01.

Generator Set Specifications

Voltage Regulation, no load to Full load:	±0.5%
Random Voltage Variation:	±0.5%
Frequency Regulation:	Isochronous
Random Frequency Variation:	±0.25%
Radio Frequency Interference:	IEC 801.2, Level 4 Electrostatic Discharge IEC 801.3, Level 3 Radiated Susceptibility IEC 801.4, Level 4 Electrical Fast Transients IEC 801.5, Level 5 Voltage Surge Immunity MIL STD 461C, Part 9 Radiated Emissions(EMI)

Engine Specifications

Design:	4 cycle, water-cooled
Bore:	5.51"(140mm)
Stroke	6.50"(165mm)
Displacement:	1860 cubic inches (30 liters)
Cylinder Block:	Cast iron
Cranking Current:	1280 amps at ambient temperature of 32F (0°C)
Battery Charging Alternator:	35 amps
Starting Voltage:	24 volt, negative ground
Fuel System:	Direct injection, number 2 diesel fuel; fuel filters; automatic electric fuel shutoff
Air Cleaner Type:	Dry element with restriction indicator
Lube Oil Filter Type(s):	Four spin-on, full flow; two by-pass oil filters
Cooling System:	104°F (40°C) ambient radiator, standard

Alternator Specifications

Design:	Brushless, 4 pole, drip proof revolving field
Stator:	2/3 pitch
Rotor:	Direct coupled by flexible disc
Insulation System:	Class H per NEMA MG1-1.65
Temperature Rise:	125° C Standby
Exciter Type:	PMG (Permanent Magnet Generator)
Phase Rotation:	A (U), B (V), C (W)
Alternator Cooling:	Direct drive centrifugal blower
AC Waveform Total Harmonic Distortion:	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor(TIF):	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF):	<3

Voltage Selections

60Hz, 3-Phase, Reconnectable	60Hz, 3-Phase, Non-Reconnectable	50Hz, 3-Phase, Reconnectable
☐ 110/190	☐ 220/380	☐ 110/190
☐ 120/208	☐ 240/416	☐ 120/208
☐ 139/240	☐ 277/480	☐ 127/220
☐ 220/380	☐ 347/600	☐ 220/380
☐ 240/416		☐ 230/400
☐ 277/480		☐ 240/415

Note: Some voltages may not be available on all models.

Generator Set Options

Engine
- ☐ 208/240/480v, 4300 watt coolant heaters
- ☐ 208/240/480v, 5600 watt coolant heaters
- ☐ Fuel/water separator
- ☐ Heavy-duty air cleaner w/service indicator

Cooling System
- ☐ High Ambient 122°F(50°C) radiator
- ☐ Heat exchanger cooling
- ☐ Remote radiator cooling

Alternator
- ☐ 105°C rise alternator
- ☐ 80°C rise alternator
- ☐ Anti-condensation heater

Control Panel
- ☐ Control anti-condensation heater
- ☐ Exhaust Pyrometer
- ☐ Ground fault indication
- ☐ Paralleling configuration
- ☐ Paralleling upgrade configuration
- ☐ Remote fault signal package
- ☐ Run relay package

Exhaust System
- ☐ Critical grade exhaust silencer
- ☐ Exhaust packages
- ☐ Industrial grade exhaust silencer
- ☐ Residential grade exhaust silencer

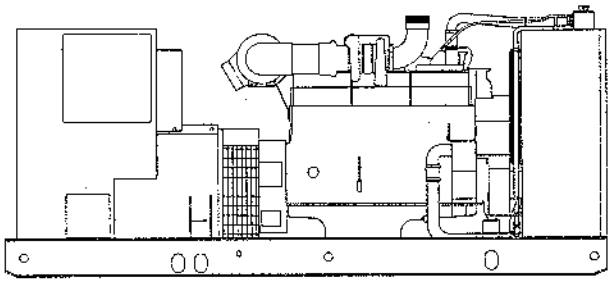
Miscellaneous
- ☐ AC entrance box
- ☐ Batteries
- ☐ Battery Charger
- ☐ Export box packaging
- ☐ Main line circuit breaker
- ☐ PowerCommand Network
- ☐ Remote annunciator panel
- ☐ Spring isolators
- ☐ 2 year prime power warranty*
- ☐ 2 year standby warranty
- ☐ 5 year basic power warranty
- ☐ 10 year major components warranty

* Available in North America Only

Cummins Onan

275kW - 400kW 60Hz
250kW - 310kW 50Hz
Diesel Fueled
NT855 Series

		Standby kW (kVA)		Prime kW (kVA)	
Model	Data Sheet	60 Hz	50 Hz	60 Hz	50 Hz
DFBF	D3009	275/344	250/313	250/313	227/284
DFCB	D3010	300/375	275/344	270/338	250/313
DFCC	D3011	350/438	310/388	315/394	282/353
DFCE	D3012	400/500			



Standard Genset Features

CUMMINS® HEAVY-DUTY ENGINE
- Rugged 4-cycle industrial diesel engine
- Excellent transient performance

ALTERNATOR
- Low reactance 2/3 pitch
- Class H insulation
- Exceptional short circuit capability
- Low voltage distortion with non-linear loads

PERMANENT MAGNET GENERATOR (PMG)
- Enhanced motor starting
- Sustained short circuit current
- Excitation system isolated from non-linear loads

FULL LOAD PICK-UP
- PowerCommand™ Gensets accept 100% of full nameplate standby rating in one step, in compliance with NFPA110

SINGLE-SOURCE RESPONSIBILITY
- Design, manufacture and test of all major set components and accessories by Onan Corporation and affiliated companies

SINGLE-SOURCE WARRANTY
- All generator set components and systems are covered by an express limited one-year warranty
- Optional extended warranty programs available

PowerCommand System Control Features

INTEGRATED CONTROL SYSTEM
- Microprocessor control system
- Reliable and optimum genset performance
- Integrated governor and voltage regulation system

ALARM AND STATUS MESSAGE DISPLAY
- Information on all critical parameters of the genset.

AMPSENTRY™ PROTECTION
- Power management system that guards the electrical integrity of the alternator and power system from the effects of overcurrent, over/under voltage, under frequency and overload conditions

BATTERY MONITORING SYSTEM
- Battery load test each time the engine is started
- Alarm for weak battery condition
- Monitors the battery system for low and high voltage

AC OUTPUT METERING
- True RMS digital metering
- Analog metering indication of operating trends

GENSET MONITORING
- Monitors status of all engine and alternator functions
- Digitally displays status of all engine and alternator functions
- Monitors and detects engine sender failures

UL508 LISTED CONTROL PANEL
- Single-membrane panel and gasketed enclosure
- RFI/EMI and surge tested and approved

SMART STARTING CONTROL SYSTEM
- Multi-functional digital control system integrates fuel ramping and field excitation to minimize frequency and voltage overshoot and limit black smoke

OPTIONAL POWERCOMMAND DIGITAL PARALLELING CONTROL
- The PowerCommand Control can be equipped to provide digital paralleling controls for synchronizing and load sharing on-set.

ISO 9001

The Prototype Test Support program verifies the performance integrity of the generator set design. Onan products bearing the PTS symbol meet the prototype test requirements of NFPA110 for Level 1 systems.

The PowerCommand Control is listed UL-508 - Category NIWT7 for U.S. and Canadian usage.

All models are CSA certified to product class 4215-01.

Generator Set Specifications

Voltage Regulation, no load to Full load:	±0.5%
Random Voltage Variation:	±0.5%
Frequency Regulation:	Isochronous
Random Frequency Variation:	±0.25%
Radio Frequency Interference:	IEC 801.2, Level 4 Electrostatic Discharge IEC 801.3, Level 3 Radiated Susceptibility IEC 801.4, Level 4 Electrical Fast Transients IEC 801.5, Level 5 Voltage Surge Immunity MIL STD 461C, Part 9 Radiated Emissions(EMI) 60 Hz: 93 dBA 50 Hz : 91 dBa

Engine Specifications

Design:	4 cycle, water-cooled
Bore:	5.0" (140mm)
Stroke	6.0" (152 mm)
Displacement:	855 cubic inches (14 liters)
Cylinder Block:	Cast iron
Cranking Current:	565 amps at ambient temperature of 32°F (0°C)
Battery Charging Alternator:	45 amps
Starting Voltage:	24 volt, negative ground
Fuel System:	Direct injection, number 2 diesel fuel; fuel filters; automatic electric fuel shutoff.
Air Cleaner Type:	Dry element with restriction indicator
Lube Oil Filter Type(s):	single spin-on, two full flow/bypass
Cooling System:	122°F (50°C) ambient radiator

Alternator Specifications

Design:	Brushless, 4 pole, drip proof revolving field
Stator:	2/3 pitch
Rotor:	Direct coupled by flexible disc
Insulation System:	Class H per NEMA MG1-1.65
Temperature Rise:	125° C @ Standby, 105°C @ Prime
Regulator:	Integral in PowerCommand Control system
Exciter Type:	Permanent Magnet Generator (PGM)
Phase Rotation:	A (U), B (V), C (W)
Alternator Cooling:	Direct drive centrifugal blower
AC Waveform Total Harmonic Distortion:	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor(TIF):	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF):	<3

Voltage Selections

60Hz, 3-Phase, Reconnectable	60Hz, 1-Phase, Non-Reconnectable	60Hz, 3-Phase, Non-Reconnectable	50Hz, 3-Phase, Reconnectable		50Hz, 1-Phase, Non-Reconnectable
☐ 120/208	☐ 120/240	☐ 240/380	☐ 110/190	☐ 230/400	☐ 100/200
☐ 127/220		☐ 347/600	☐ 115/200	☐ 240/415	☐ 110/220
☐ 139/240			☐ 120/208	☐ 254/440	☐ 115/230
☐ 120/240			☐ 127/220	☐ 115/230	☐ 120/240
☐ 240/415			☐ 100/200	☐ 120/240	
☐ 254/440			☐ 110/220		
☐ 277/480			☐ 220/380		

Note: Some voltages may not be available on all models.

Generator Set Options

Engine
- ☐ Fuel/Water separator
- ☐ Heavy duty air cleaner with safety element
- ☐ 208/240/480 Volt 2500W coolant heaters
- ☐ 75 Amp Battery Charge Alternator

Cooling System
- ☐ Heat exchanger cooling (except DFCE
- ☐ Remote radiator cooling (except DFCE

Alternator
- ☐ Anti-condensation heater
- ☐ 80°C rise alternator
- ☐ 105°C rise alternator

Control Panel
- ☐ Control anti-condensation heater
- ☐ Exhaust Pyrometer
- ☐ Ground fault indication
- ☐ Remote fault signal package
- ☐ Run relay package

Exhaust System
- ☐ Critical grade exhaust silencer
- ☐ Exhaust packages
- ☐ Industrial grade exhaust silencer
- ☐ Residential grade exhaust silencer

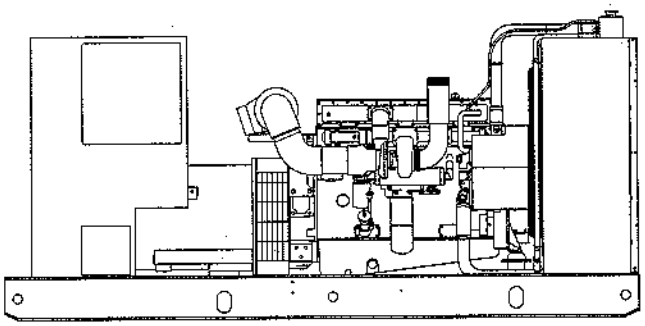
Fuel System
- ☐ 154 gallon (583 liter) sub-based tank
- ☐ 520 gallon (1968 liter) sub-based tank
- ☐ 27 gallon (103 liter) in-skid day task

Miscellaneous
- ☐ AC entrance
- ☐ Batteries
- ☐ Battery Charger
- ☐ Export box packaging
- ☐ Isolation pads
- ☐ Main line circuit breaker
- ☐ Paralleling accessories
- ☐ PowerCommand Network
- ☐ Remote annunciator panel
- ☐ Spring isolators
- ☐ 2 year prime power warranty
- ☐ 2 year standby warranty
- ☐ 5 year basic power warranty
- ☐ 10 year major components warranty

* Available in North America Only

200kW - 250kW 60Hz
Diesel Fueled
MII Series

		Standby kW (kVA)		Prime kW (kVA)	
Model	Data Sheet	60 Hz	50 Hz	60 Hz	50 Hz
DQAA	D3007	200/250		180/225	
DQAB	D3008	250/313		225/281	



Standard Genset Features

LOW EXHAUST EMISSIONS
- Certified to United States Environmental Protection Agency Mobile off Highway standards

CUMMINS® HEAVY-DUTY ENGINE
- Rugged 4-cycle industrial diesel engine
- Excellent transient performance

ALTERNATOR
- Low reactance 2/3 pitch
- Class H insulation
- Exceptional short circuit capability
- Low voltage distortion with non-linear loads

PERMANENT MAGNET GENERATOR (PMG)
- Enhanced motor starting
- Sustained short circuit current
- Excitation system isolated from non-linear loads

FULL LOAD PICK-UP
- PowerCommand™ Gensets accept 100% of full nameplate standby rating in one step, in compliance with NFPA110

SINGLE-SOURCE RESPONSIBILITY
- Design, manufacture and test of all major set components and accessories by Onan Corporation and affiliated companies

SINGLE-SOURCE WARRANTY
- All generator set components and systems are covered by an express limited one-year warranty
- Optional extended warranty programs available

PowerCommand System Control Features

INTEGRATED CONTROL SYSTEM
- Microprocessor control system
- Reliable and optimum genset performance
- Integrated governor and voltage regulation system

ALARM AND STATUS MESSAGE DISPLAY
- Information on all critical parameters of the genset.

AMPSENTRY™ PROTECTION
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UL508 LISTED CONTROL PANEL
- Single-membrane panel and gasketed enclosure
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SMART STARTING CONTROL SYSTEM
- Multi-functional digital control system integrates fuel ramping and field excitation to minimize frequency and voltage overshoot and limit black smoke

OPTIONAL POWERCOMMAND DIGITAL PARALLELING CONTROL
- The PowerCommand Control can be equipped to provide digital paralleling controls for synchronizing and load sharing on-set.

Registered To ISO 9001

The Prototype Test Support program verifies the performance integrity of the generator set design. Onan products bearing the PTS symbol meet the prototype test requirements of NFPA110 for Level 1 systems.

The PowerCommand Control is listed UL-508 - Category NIWT7 for U.S. and Canadian usage.

All models are CSA certified to product class 4215-01.

Generator Set Specifications

Voltage Regulation, no load to Full load:	±0.5%
Random Voltage Variation:	±0.5%
Frequency Regulation:	Isochronous
Random Frequency Variation:	±0.25%
Radio Frequency Interference:	IEC 801.2, Level 4 Electrostatic Discharge IEC 801.3, Level 3 Radiated Susceptibility IEC 801.4, Level 4 Electrical Fast Transients IEC 801.5, Level 5 Voltage Surge Immunity MIL STD 461C, Part 9 Radiated Emissions(EMI)

Engine Specifications

Design:	4 cycle, water-cooled
Bore:	4.92" (125mm)
Stroke	5.79" (147 mm)
Displacement:	661 cubic inches (10.8 liters)
Cylinder Block:	Cast iron
Cranking Current:	550 amps at ambient temperature of 32°F (0°C)
Battery Charging Alternator:	45 amps
Starting Voltage:	24 volt, negative ground
Fuel System:	Direct injection, number 2 diesel fuel; fuel filters; automatic electric fuel shutoff.
Air Cleaner Type:	Dry element with restriction indicator
Lube Oil Filter Type(s):	Single spin-on, two full flow/bypass
Cooling System:	122°F (50°C) ambient radiator

Alternator Specifications

Design:	Brushless, 4 pole, drip proof revolving field
Stator:	2/3 pitch
Rotor:	Direct coupled by flexible disc
Insulation System:	Class H per NEMA MG1-1.65
Temperature Rise:	125° C Standby, 105°C @ Prime
Exciter Type:	Permanent Magnet Generator (PMG)
Phase Rotation:	A (U), B (V), C (W)
Alternator Cooling:	Direct drive centrifugal blower
AC Waveform Total Harmonic Distortion:	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor(TIF):	<50 per NEMA MG1-22.43
Telephone Harmonic Factor (THF):	<3

Voltage Selections

60Hz, 3-Phase, Reconnectable	60Hz, 1-Phase, Non-Reconnectable	60Hz, 3-Phase, Non-Reconnectable	50Hz, 3-Phase, Reconnectable	50Hz, 1-Phase, Non-Reconnectable
☐ 120/208	☐ 120/240	☐ 220/280		
☐ 127/220		☐ 347/600		
☐ 139/240				
☐ 120/240				
☐ 240/415				
☐ 254/440				
☐ 277/480				

Note: Some voltages may not be available on all models.

Generator Set Options

Engine
- ☐ Fuel/Water separator
- ☐ Heavy duty air cleaner with safety element
- ☐ 208/240/480 Volt 2500 W coolant heaters

Cooling System
- ☐ Heat exchanger cooling
- ☐ Remote radiator cooling

Alternator
- ☐ Anti-condensation heater
- ☐ 80°C rise alternator
- ☐ 105°C rise alternator

Control Panel
- ☐ Control anti-condensation heater
- ☐ Exhaust Pyrometer
- ☐ Ground fault indication
- ☐ Remote fault signal package
- ☐ Run relay package

Exhaust System
- ☐ Critical grade exhaust silencer
- ☐ Exhaust packages
- ☐ Industrial grade exhaust silencer
- ☐ Residential grade exhaust silencer

Fuel System
- ☐ 138 gallon (522 liter) sub-based tank
- ☐ 484 gallon (1832 liter) sub-based tank
- ☐ 19 gallon (72 liter) in-skid day task

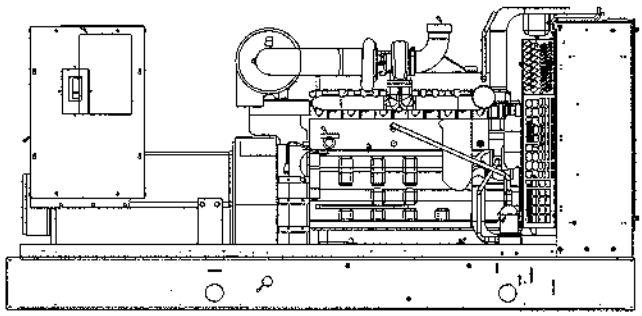
Miscellaneous
- ☐ AC entrance box
- ☐ Batteries
- ☐ Battery Charger
- ☐ Export box packaging
- ☐ Isolation pads
- ☐ Main line circuit breaker
- ☐ Paralleling accessories
- ☐ PowerCommand Network
- ☐ Remote annunciator panel
- ☐ Spring isolators
- ☐ 2 year prime power warranty*
- ☐ 2 year standby warranty
- ☐ 5 year basic power warranty
- ☐ 10 year major components warranty*

* Available in North America Only

Cummins Onan

125kW - 200kW 60 Hz
110kW - 176kW 50 Hz
Diesel Fueled
6C Series

Model	Data Sheet	EPA-MOH	Standby kW (kVA)		Prime kW (kVA)	
			60 Hz	50 Hz	60 Hz	50 Hz
DGEA	D-3018	Standard	**125** (156)	**110** (138)	**113** (141)	**100** (125)
DGFA	D-3019	Optional	**150** (188)	**140** (175)	**135** (169)	**125** (156)
DGFB	D-3020	Optional	**175** (219)	**150** (188)	**160** (200)	**135** (169)
DGFC	D-3021	Not Available	**200** (250)	**176** (220)	**180** (225)	**160** (200)



ISO 9001

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The PowerCommand Control is listed UL-508 - Category NITW7 for U.S. and Canadian usage.

All models are CSA certified to product class 4215-01.

Standard Genset Features

CUMMINS® HEAVY-DUTY ENGINE
- Rugged 4-cycle industrial diesel engine
- Excellent transient performance

ALTERNATOR
- Low reactance 2/3 pitch
- Class H insulation
- Exceptional short circuit capability
- Low waveform distortion with non-linear loads
- Excellent motor starting capabilities

ELECTRONIC VOLTAGE REGULATOR
- Precise regulation
- Underfrequency compensation
- Torque-matched system provides fast recovery from transient load changes

FULL LOAD PICK-UP
- Gensets accept 100% of full nameplate standby rating in one step, in compliance with NFPA110, Paragraph 5-13.2.6.

COOLING SYSTEM
- High ambient 122° F (50° C) system optional, 104°F (40°C) system standard

SKID BASE
- Supports engine, alternator and radiator with integral vibration isolation

E-COAT FINISH
- Dual electro-deposition coating system provides high resistance to scratching, corrosion and paint fading

STANDARD CONTROL SYSTEM
- Run-Stop-Remote Switch
- Remote Starting, 12 Volt, 2 Wire
- Safety Shutdowns

OPTIONAL CONTROL SYSTEMS
- Detector 12 Control NFPA 110 Compliant
- PowerCommand Advanced Digital Control

SINGLE-SOURCE RESPONSIBILITY
- Design, manufacture and test of all major set components and accessories by Onan Corporation and affiliated companies.

SINGLE-SOURCE WARRANTY
- All generator set components and systems are covered by an express written limited one-year warranty
- Optional extended warranty programs available

Generator Set Specifications

Voltage Regulation, no load to Full load:	±1.0%
Random Voltage Variation:	±1.0%
Frequency Regulation:	5.0%
Random Frequency Variation:	±0.5%
Radio Frequency Interference:	Optional PMG excitation operates in compliance with BS800 and VDE level G and N. Addition of RFI protection kit allows operation per MIL-STD- 461 and VDE level K

Engine Specifications

Design:	4 cycle, water-cooled
Bore:	4.49" (114mm)
Stroke	5.32" (135 mm)
Displacement:	504 cubic inches (8.3 liters)
Cylinder Block:	Cast iron
Cranking Current:	460 amps at ambient temperature of 32°F (0°C)
Battery Charging Alternator:	37 amps
Starting Voltage:	12 volt, negative ground
Fuel System:	Direct injection, number 2 diesel fuel; fuel filters; water separator; automatic electric fuel shutoff
Air Cleaner Type:	Dry element with restriction indicator
Lube Oil Filter Type(s):	2 stage single spin-on, combination full flow with bypass
Cooling System:	104°F (40°C) ambient radiator

Alternator Specifications

Design:	Brushless, 1800 RPM (60 Hz), 1500 RPM (50 Hz), 4 pole, drip proof revolving field
Stator:	2/3 pitch
Rotor:	Direct coupled by flexible discs
Insulation System:	Class H per NEMA MG1-1.65
Temperature Rise:	150° C Standby
Exciter Type:	Shunt
Phase Rotation:	A (U), B (V), C (W)
Alternator Cooling:	Direct drive centrifugal blower
AC Waveform Total Harmonic Distortion:	<5% total no load to full linear load <3% for any single harmonic
Telephone Influence Factor(TIF):	<50 per NEMA MG1-22.43.
Telephone Harmonic Factor (THF):	<3

Voltage Selections

60Hz, 3-Phase, Reconnectable	60Hz, 1-Phase, Non-Reconnectable	60Hz, 3-Phase, Non-Reconnectable	50Hz, 3-Phase, Reconnectable		50Hz, 1-Phase, Non-Reconnectable
☐ 120/208	☐ 120/240	☐ 220/380	☐ 110/190	☐ 230/400	☐ 100/200
☐ 127/220		☐ 347/600	☐ 115/220	☐ 240/415	☐ 110/220
☐ 139/240			☐ 120/208	☐ 254/440	☐ 115/230
☐ 120/240			☐ 127/220	☐ 115/230	☐ 120/240
☐ 240/416			☐ 100/200	☐ 120/240	
☐ 254/440			☐ 110/220		
☐ 227/480			☐ 220/380		

Generator Set Options

Engine
- ☐ 120/240 Volt, 1500 watt coolant heaters
- ☐ 120/240 Volt, 150 watt lube oil heater
- ☐ Electronic governor
- ☐ EPA Mobile off highway exhaust emission certification

Cooling System
- ☐ 125°F/50°C ambient cooling
- ☐ Remote radiator cooling

Fuel System
- ☐ 109 gal.(413 liter) dual wall sub-base tank
- ☐ 173 gal.(655 liter) dual wall sub-base tank
- ☐ 336 gal. (1271 liter) dual wall sub-base tank
- ☐ 125 gal. (473 liter) single wall sub-base tank

Alternator
- ☐ 105°C rise alternator
- ☐ 125°C rise alternator
- ☐ Anti-condensation heater
- ☐ Extended stack(full single phase output some models)
- ☐ PMG excitation

Control Panel
- ☐ Control anti-condensation heater
- ☐ CSA 282 compliance package
- ☐ Detector 12 control
- ☐ Emergency stop
- ☐ Engine gauges
- ☐ Low battery voltage warning
- ☐ Low coolant level warning/shutdown
- ☐ PowerCommand Control
- ☐ Remote fault signal package
- ☐ Remote speed adjust

Exhaust System
- ☐ Genset mounted muffler
- ☐ Heavy duty exhaust elbow
- ☐ Slip on exhaust connection

Generator Set
- ☐ AC entrance box
- ☐ Batteries
- ☐ Battery Charger
- ☐ Export box packaging
- ☐ Main line circuit breaker
- ☐ PowerCommand Network
- ☐ Quite Site Stage I housing w/silencer
- ☐ Quite Site Stage II housing w/silencer
- ☐ Remote annunicator panel
- ☐ Spring isolators
- ☐ Weather protective enclosure with silencer
- ☐ 2 year prime power warranty*
- ☐ 2 year standby warranty
- ☐ 5 year basic power warranty

* Available in North America Only